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ACE Paper 15/2018
For discussion on 3 December 2018

Public Consultation on Supply of Recycled Water in Hong Kong

PURPOSE

This paper informs Members of the public consultation being conducted on the supply of recycled water¹ in Hong Kong and invites Members' views on the proposal.

BACKGROUND

2. Climate change makes significant impact on water resources around the world. To ensure water security and sustainable development of water resources, we have been actively exploring new water sources that are not susceptible to climate change, including recycled water, in Hong Kong.

3. The Government announced in the Policy Agenda in 2017 and 2018 the target of reducing the per capita fresh water consumption in Hong Kong by 10% by 2030 at the earliest, using 2016 as the base year. The use of lower-grade water sources in lieu of fresh water for flushing and other non-potable uses is one of the three key drives to realise the water saving targets. The use of recycled water, one of the examples of lower-grade water sources, in lieu of fresh water conserves precious water resource and also minimises impacts to the environment by reducing the amount of treated sewage effluent discharged to the receiving water.

¹ Recycled water comprises reclaimed water (from the processing of treated effluent from sewage treatment works), treated grey water (from the treatment of used water collected from baths, wash basins, kitchen sinks or similar fittings) and rainwater harvested in housing developments or facilities.

4. The Government plans to supply reclaimed water, converted from tertiary treated sewage effluent at the Shek Wu Hui Sewage Treatment Works, to north-eastern part of the New Territories to replace fresh water for flushing starting with Sheung Shui and Fanling from 2022 onwards. The Government also plans to supply treated grey water by a centralised grey water recycling system treating grey water collected from inhabitants at the Anderson Road Quarry development site for flushing use. In addition, the Government is exploring the use of rainwater harvested in underground stormwater tank at the Anderson Road Quarry development site for non-potable uses.

THE PROPOSAL

5. In view of the plan to supply recycled water in Hong Kong, we are formulating proposal on aspects including the supply, charge and use of recycled water and have prepared a consultation document (see the **Annex**) to gauge the public views on the proposal, which include the following key items:

- (i) Supply of recycled water by the Water Supplies Department (WSD) for non-potable uses, such as flushing;
- (ii) Measures to prevent misuse of the recycled water supplied by the WSD and cross-connections between fresh water supply systems and recycled water supply systems, such as exploring colour-labelling of recycled water;
- (iii) Charge for use of recycled water supplied by the WSD, such as supplying recycled water for flushing free-of-charge;
- (iv) Control of the use of recycled water supplied by parties other than the WSD; and
- (v) Implementation arrangements of the proposal.

PUBLIC CONSULTATION

6. The public consultation will last for 60 days from 19 October to 17 December 2018. Three public forums were held in Kowloon, Hong Kong and New Territories for the general public on 7, 15 and 17 November 2018. The consultation also covers relevant advisory committees and various stakeholders, including the Advisory Council on the Environment, Prevention of Legionnaires' Disease Committee, Advisory Committee on Water Supplies, 18 district councils, green groups,

professional bodies and trade associations, etc. The feedbacks and views received so far are positive and supportive to the supply of recycled water in Hong Kong. All the views received will be carefully considered before finalising our proposal.

ADVICE SOUGHT

7. Members are invited to provide views on the proposal set out in the consultation document on supply of recycled water in Hong Kong.

Water Supplies Department
November 2018

Supply of Recycled Water in Hong Kong Consultation Document



發展局
Development Bureau



October 2018

Supply of Recycled Water in Hong Kong Consultation Document

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Chapter 1 - Introduction

The Development Bureau (“DEVB”) and Water Supplies Department (“WSD”) of the Hong Kong Special Administrative Region Government (“Government”) plan to supply recycled water in full scale and are formulating the proposal on the supply, charge and use of recycled water in Hong Kong including legislative amendments under Waterworks Ordinance (Cap. 102) (“WWO”) and Waterworks Regulations (Cap. 102A) (“WWR”). This consultation document aims to invite views on the proposal.

2. In the context of this consultation document, unless otherwise specified, water recycling is the process of additional treatment at waterworks facilities of WSD for the supply of recycled water converted from (i) treated sewage effluent¹ (“TSE”), (ii) grey water² or (iii) rain water collected outside gathering grounds³. The recycled water to be supplied by WSD is intended for toilet flushing (“flushing”) and other non-potable uses (e.g. landscape irrigation, street cleansing, water features, car washing, etc.), comprising:

- (i) reclaimed water (converted from TSE);
- (ii) treated grey water; and
- (iii) harvested rainwater.

¹ In general, used water discharged from baths, lavatory basins, wash basins, sinks or similar fittings in premises and sewage discharged from water-closets, latrines, urinals or similar fittings in premises are collected via the combined “waste” and “soil” pipe systems within the development and transported via the sewerage to wastewater treatment works for treatment; and the treated water (i.e. TSE) will be disposed of to the receiving water.

² Grey water is the used water discharged from baths, lavatory basins, wash basins, sinks or similar fittings in premises.

³ Under the WWO, gathering ground means any surface of land (i) in or by which rain or other water is collected for the purposes of a supply; and (ii) which is mapped as a gathering ground under section 23 of the Ordinance.

Chapter 2 - Background

Water Sources in Hong Kong

3. Hong Kong lacks fresh water resources. There are no natural lakes, rivers or substantial underground water sources. Currently, the water demand is coped with by three water sources, namely (i) local yield, (ii) raw water imported from Dongjiang of Guangdong Province and (iii) seawater for flushing.

Seawater for Flushing

4. The major non-potable use of water in Hong Kong is for flushing. Hong Kong is the pioneer in the world using seawater for flushing since 1957. At present, the seawater flushing network covers about 85% of the total population in the territory. Seawater, being a type of lower-grade water source⁴, helps save a considerable amount of precious fresh water which would otherwise be used for flushing. All buildings constructed after mid-1960s are equipped, as an integral part of building structure, with two sets of discrete plumbing systems to receive fresh water supply (for potable use) and flushing water supply.
5. Nevertheless, some of the inland areas (e.g. the North District) are distant from the coast whilst some other areas (e.g. the Peak, Southern District, Sai Kung and Outlying Islands) are either located at high altitudes or sparsely populated, rendering it not cost-effective to provide a separate network for the supply of seawater for flushing in these areas. Their flushing need is met by the use of fresh water, i.e. Temporary Mains Water for Flushing (“TMF”).

⁴ Recycled water is another example of lower-grade water sources.

Policy Consideration

6. As can be seen in other places in the world, climate change makes significant impact on the water resources. In order to ensure water security and sustainable development in Hong Kong in the face of climate change, the WSD promulgated the Total Water Management strategy in 2008. The strategy puts emphasis on containing growth of water demand through water conservation while strengthening water supply by exploration of new water sources that are less susceptible to climate change such as recycled water and desalinated water.
7. The Government announced in the Policy Agenda in October 2017 the target of reducing the per capita fresh water consumption in Hong Kong by 10% by 2030 at the earliest, using 2016 as the base year. We plan to realise the target through (i) water conservation, (ii) water loss management and (iii) use of lower-grade water sources in lieu of TMF and other non-potable uses.

Chapter 3 - The Proposal

Supply of Recycled Water for Non-potable Uses

8. The use of recycled water has been increasingly practiced throughout the world, including the United States of America, Australia and Singapore etc. The common uses of recycled water in urban areas of the United States of America and Australia are for irrigation of green areas, e.g. parks, golf courses, sports fields and greenbelts, etc., whilst recycled water in Singapore is mainly supplied for industrial uses. At present, very few places⁵ in the world use recycled water for direct potable use because most of the people do not accept drinking recycled water.

⁵ Examples of places using recycled water for direct potable use are Windhoek in Namibia and Beaufort West in South Africa etc. There are also examples using recycled water for indirect potable use, such as Singapore where a certain amount (at 2% to the total daily potable water consumption) of “NEWater” (i.e. recycled water converted from sewage treatment works) is injected into fresh water impounding reservoirs and the mixed water is treated by water treatment plants before supplying for potable use.

9. In Hong Kong, the Government has embarked on two pilot schemes on use of reclaimed water converted from TSE at Ngong Ping Sewage Treatment Works (“NPSTW”) and Shek Wu Hui Sewage Treatment Works (“SWHSTW”) since late 2005 and from October 2006 to June 2008 respectively. The review of these schemes has established the technical feasibility of using reclaimed water converted from highly treated TSE at STWs for non-potable uses, including flushing, landscape irrigation, water features and car washing, etc.
10. It is worthwhile to note that the Government conducted an opinion survey⁶ in the NPSTW pilot scheme which revealed that more than 90% of the general public accepted the use of reclaimed water for flushing while less than 10% of the survey participants considered drinking of reclaimed water appropriate.

Question 1:

Do you agree to use recycled water in Hong Kong for non-potable applications only? If not, why?

Supply of Recycled Water by WSD

11. DEVB and WSD have been actively exploring the use of recycled water by providing a centralized recycled water supply system in (i) those areas where TMF is being used for flushing and (ii) in new development areas especially in the inland areas, whenever it is cost-effective for its implementation. The use of recycled water also minimises impacts to the environment by reducing the amount of TSE discharged to the receiving water.

⁶ The public opinion survey in the NPSTW pilot scheme aimed at gauging the public views by (i) 2 rounds of face-to-face surveys (in June 2007 and June 2008) of the users of the reclaimed water for flushing in the public toilets at Ngong Ping, and (ii) random telephone surveys (in April 2008) of the general public in Hong Kong (with a total of 1 515 Hong Kong citizens of age 18 or above successfully interviewed) with regard to their perception and acceptance level on the various uses of reclaimed water.

12. Specifically for the supply of reclaimed water, the availability of a tertiary sewage treatment works producing highly treated effluent in the proximity to the supply areas would play a determining role on the feasibility and cost-effectiveness of the supply of reclaimed water to the areas by a centralised reclaimed water supply system.
13. For example, the expansion and upgrading of SWHSTW to tertiary treatment level offers the opportunity to provide (i) considerable amount of tertiary TSE and (ii) the cost-effective solution for the production and supply of reclaimed water to the inland areas in north-eastern part of the New Territories (including Sheung Shui and Fanling) for non-potable uses, e.g. toilet flushing.
14. For grey water recycling by a centralised treatment works and supply distribution system, new buildings (i.e. primarily those in the new development areas) can be designed and constructed with separated waste and soil pipe systems with the former to capture grey water in separation from sewage (which is discharged from water-closets, latrines, urinals or similar fittings to the soil pipe system and is with higher concentration of organic compounds and contaminants for treatment). This is however impracticable in the existing buildings unless with disturbing and costly modification works to retrofit the grey water collection system of the building at a cost to be borne by owners. With regard to a centralized rainwater harvesting system that requires the stability of harvesting and supply of rainwater, a sizeable storage tank is required to be constructed in conjunction with the treatment facilities for the supply of the harvested rainwater as recycled water via the supply distribution system.
15. It would be generally cost ineffective for the Government to supply more than one type of lower-grade water sources to the same area for non-potable uses, by operating two separate centralised lower-grade water supply systems.

Question 2:

Do you agree that the Government should supply recycled water for non-potable uses in lieu of fresh water to conserve precious water resource when opportunities arise and cost effective to do so? If not, why?

16. Moreover, the use of recycled water in replacement of salt water for flushing in the existing salt water supply zones may only be justified if a proper balance can be struck amongst the various considering factors such as environmental benefits brought about by saving TSE discharge to the receiving water, cost-effectiveness, etc.

Question 3:

Do you agree to use recycled water for flushing in lieu of salt water in the existing salt water supply zones if it is justified after consideration of the various factors such as environmental impact, cost effectiveness, etc.? If not, why?

17. If a centralised recycled water supply system is to be implemented by collecting grey water for production of the recycled water (treated grey water) in a given area, grey water shall be collected and transmitted in separation from the sewage from water-closets, latrines, urinals or similar fittings in the buildings. In this connection, we need to make amendments to the WWO and WWR in order to require buildings in the areas designated by the Water Authority ("WA")⁷, primarily new development areas, to install a dedicated system (i.e. the waste pipe system) for collection and transmission of grey water to the WA's grey water collection system for treatment and supply of treated grey water. Penalty⁸ would be imposed to a person who does not comply with the law.

⁷ Under the WWO, the Director of Water Supplies is the WA.

⁸ The penalty level for the offence is proposed to be pitched at level 4 for a maximum fine of \$25,000.

Question 4:

Do you agree to put in place legal provisions requiring collection and transmission of grey water in separation from sewage from water-closets, latrines, urinals or similar fittings in buildings in designated areas to effect the subsequent production of recycled water by WSD, and impose penalty on a person who fails to comply with the legal provisions?

If affirmative, should penalty be imposed to:

(A) a person who carries out the works in contravention of the legal provisions; or

(B) a person who instructs the works in contravention of the legal provisions or

(C) both of them?

If not, why?

Prevention of Misuse of Recycled Water Supplied by WSD

18. The recycled water to be supplied by WSD will meet the water quality standards prescribed for the permitted non-potable uses. However, the quality standards of recycled water are not up to that of the drinking water in Hong Kong. Therefore, the recycled water should neither be for potable uses nor used for all non-potable purposes except those non-potable uses that may be permitted by the WA including flushing, landscape irrigation, street cleansing, water features and car washing, etc.

19. Recycled water is typically colourless and odourless. Although the recycled water will be supplied through an independent distribution system, the risks of cross-connections between the fresh water supply system and recycled water supply system, such as the plumbing systems in the inside service⁹ of the premises owned or maintained by the owners, registered consumers or registered agents cannot be eliminated. Moreover, there is also the risk of misuses of recycled water, unintentionally or otherwise. Since cross-connections and misuse of recycled water will give rise to health concerns¹⁰, we plan to adopt a multiple-barrier approach, on top of specifying the recycled water quality standards for the permitted non-potable uses, by implementing preventive measures to control the risks.
20. In lack of any provisions in the existing WWO and WWR to regulate and control over the use of recycled water, we propose, as the foremost barrier, legal amendments to regulate and control the use of recycled water by express prohibition on uses other than the permitted uses (i.e. flushing and other uses as may be permitted by the WA from time to time). Penalty¹¹ would be imposed to a person who contravenes the legal provisions in relation to the control on the use of recycled water.

Question 5:

Do you agree to have legal provisions to regulate and control the use of recycled water to be supplied by WSD, and impose penalties on contravention of such provisions e.g. intentional misuse of recycled water? If not, why?

⁹ Under the Waterworks Ordinance, inside service means the pipes and fittings in premises, and any pipes and fittings between the premises and a connexion to the main, (other than the pipes and fittings forming part of a fire service) which are used or are intended to be used for the purposes of a supply.

¹⁰ The recycled water quality standards in Hong Kong for the permitted non-potable uses contain 11 parameters, the standard values of relevant parameters are less stringent and do not fully cover the 92 parameters (one bacteriological parameter, 89 health-related chemical parameters and two parameters for radiological screening of water) in the Hong Kong Drinking Water Standards.

¹¹ The penalty level is proposed to be ranged from level 3 to level 5 for maximum fine of \$10,000 to \$50,000 respectively.

21. We would also develop other preventive measures including (i) the use of distinctive features of pipes such as colour, labelling and sizes different from those of the pipes used for the fresh water supply system, if practicable, (ii) issuance of guidelines on connection procedures, and operation and maintenance manual for the recycled water supply system, and (iii) introductions of measures to the general public and relevant stakeholders via promotions and education to minimize the risks of cross-connections.
22. As an additional preventive measure, colour-labelling of recycled water (i.e. addition of food-grade dye¹² to recycled water) is being considered to (i) make recycled water discernible to fresh water, and (ii) give an immediate visual warning to customers in case of the fresh water supply system being contaminated by recycled water.
23. Colour-labelling of recycled water can be implemented at the waterworks facilities producing the recycled water. However, colour-labelled recycled water would likely limit its application to flushing only but not other non-potable uses such as landscape irrigation, street cleansing, water features and car washing, etc.
24. According to the water consumption of the permitted fresh water non-potable uses in Hong Kong in 2017, about 91% is for flushing while the remaining 9% is for other uses, such as landscape irrigation, street cleansing, water features and car washing, etc. Therefore, the colour-labelling of recycled water, although limiting its use to flushing, would still save a considerable amount of fresh water.

¹² A consultancy study was conducted to review the technical feasibility and implications of colour-labelling of recycled water. It recommended that the use of Brilliant Blue FCF or commonly called Acid Blue 9 (AB-9) would be a feasible dye for the colour-labelling of recycled water.

In addition to being a food-grade dye listed in the Colouring Matter in Food Regulations under the Public Health and Municipal Services Ordinance (Cap. 132H), AB-9 is also permitted as a food colourant in European Union and United States of America. It is blue in colour and known under various commercial applications as a colourant for foods and dairy products, e.g. cakes, sweets and beverages, and has also been used in toilet bowl cleaners, soaps, shampoos, mouthwash and other hygiene and cosmetics products as well as biological stain etc.

25. Nevertheless, the Government will explore the use of recycled water without colour-labelling for the other permitted non-potable uses by Government departments in areas where the risks of cross-connection and/or misuse can be effectively controlled and minimised. The potential non-potable uses of recycled water without colour-labelling that may be permitted for uses after proper treatment in the water reclamation facilities include landscape irrigation, street cleansing, water features and car washing when appropriate preventive measures are in place.

Question 6:

Do you agree to the addition of dye to recycled water (i.e. “colour-labelling”) to be supplied by WSD, as an additional measure to prevent cross-connection between recycled water and fresh water supply systems and misuse of recycled water, which may limit to the major application in flushing only but not minor applications for other non-potable uses? If not, why?

Question 7:

Notwithstanding Question 6, do you agree to the following non-potable uses of recycled water to be supplied by WSD without colour-labelling, for uses by Government departments to conserve fresh water resource in areas where the risks of cross-connection and/or misuse are minimal and appropriate preventive measures are in place?

- (A) Landscape Irrigation; (B) Street Cleansing;
(C) Water Features; (D) Car Washing; and
(E) Others (please specify)**

If affirmative, please select the relevant uses, and specify other uses in (E) when necessary. If not, why?

26. The worldwide advances in water researches and technological innovation to water recycling may further diversify the applications of recycled water. In the face of climate change, we will continuously exploit the opportunities of new uses/applications of recycled water that may emerge from time to time to build up our resilience for sustainable development of water in Hong Kong. When the new uses/applications are considered technically proven, financially viable and widely accepted by the public, it may have the merits to provide power and flexibility to the WA in the legal provision to timely permit such new uses/applications of recycled water to be supplied by WSD in Hong Kong rather than effecting changes on the permitted uses by way of legislation.

Question 8:

Do you agree that the WA should also be empowered with flexibility to permit non-potable uses of recycled water other than flushing when opportunities arise and the corresponding risks are under control, instead of effecting changes on the legislation from time to time? If not, why?

Charge for Use of Recycled Water Supplied by WSD

27. The Government's policy on fees and charges is based on the fundamental principle of "User Pays". At present, the WSD supplies salt water for flushing at zero tariff while TMF is charged at (i) zero tariff for the first 30 cubic metres (m³) per flat (for domestic users) or 30 m³ per floor (for non-domestic users) over a four-month billing period and (ii) \$4.58/m³ for subsequent usage. The free-of-charge supply of flushing water is a basic service for sanitation and the production cost for flushing supplies is met wholly by contribution from rates. The charge of TMF for usage above the first 30 m³ per flat or per floor is imposed at the same charge for the supply for trade purpose in order to discourage the misuse of the TMF for other purposes.
28. As the recycled water is another lower-grade water supplied for flushing, the free-of-charge arrangement for flushing use may be applied. The recycled water particularly with colour-labelling, if adopted, is unlikely to be misused for other purposes and it is not necessary to impose a charge for higher usage like the TMF.

Question 9:

Do you agree to the free-of-charge arrangement for the use of recycled water for flushing similar to that of the existing flushing supplies? If not, why?

Question 10:

If the recycled water is permitted for non-potable uses other than flushing, do you agree that it should be charged? If not, why?

Supply of Recycled Water by Parties Other than WSD

29. In Hong Kong, with the growing awareness of water conservation and environmental protection, on-site water recycling systems may be implemented in new and the existing buildings¹³. With technological advancement in waste water recycling, it is expected that more and more on-site water recycling systems will be implemented in Hong Kong.
30. At present, the contaminated treatment processing unit of the on-site water recycling system if in such a state as to be a nuisance or injurious or dangerous to health, could be regulated through the Public Health and Municipal Services Ordinance (Cap. 132). In addition, the Environmental Impact Assessment Ordinance (Cap. 499) regulates design, construction and operation of the reclaimed water supply system. It should however be noted that the WWO and WWR are for control of the water supplied by WSD and may not be the suitable legislation for the regulatory control of on-site water recycling systems.
31. On one hand, strengthening the regulatory control on the aspects, such as plumbing, water quality and/or uses of the recycled water in relation to the on-site water recycling systems might be seen as the direct way to protect the public from the health risks arising from uses of the recycled water supplied by parties other than WSD.

¹³ For example, the Building Environmental Assessment Method ("BEAM") Plus recognized and certified by the Hong Kong Green Building Council encourages the installation and use of on-site water recycling systems in existing or new buildings, in particular the grey water reuse and/or rain water harvesting systems.

32. On the other hand, a stricter regulatory control might weaken the inherent incentives for on-site water recycling and ultimately dissuade the non-government parties from installing on-site water recycling system countering the goal of conserving precious fresh water.
33. With a view to striking an appropriate balance of water conservation and health risks arising from the supplies of recycled water by parties other than WSD, a combination of multiple normative elements might be effected including but not limited to public education, training and guidance to stakeholders on water recycling, etc. together with the existing legislation on regulatory control of on-site water recycling systems.

Question 11:

Do you agree that the regulatory control by the existing legislations on the supply of recycled water by parties other than WSD is adequate?

If not, should the regulatory control on the following aspects of the supply of recycled water by parties other than WSD be strengthened by legislation:

(A) plumbing; or (B) water quality; or (C) use of recycled water or (D) any combination of (A), (B) and (C) (please specify)?

Transitional Arrangement and Retrospective Effect

34. WSD plans to supply recycled water for flushing in Hong Kong starting from 2022. To this effect, legislative amendments to the WWO and WWR for the supply, charge (if applicable) and use of recycled water supplied by WSD shall be completed beforehand. Sufficient time would be allowed for the publicity and education of the new statutory requirements to ensure a smooth transition for their implementation.
35. Amendments to relevant legislations in relation to the supply of recycled water would be proposed to be applied prospectively with due considerations on the existing recycled water systems installed and operated before the enactment as well as the impacts to relevant parties in relation to these systems. It is proposed that the relevant amendments, if relevant and enacted, would not take retrospective effect.

Question 12:

Do you agree that amendments to legislation in relation to the supply of recycled water (including those pertinent to the supply by parties other than WSD if required) would not take retrospective effects? If not, why?

Chapter 4

Response to this Consultation Document

36. To help arrive at the best way to formulate the proposal on the amendments to the WWO, WWR and any other relevant legislations on the supply of recycled water in Hong Kong, your views and comments are invited as set out in this consultation document. Views and comments in writing and the duly completed Appendix can be sent to the WSD on or before **17 December 2018** by mail, e-mail or facsimile:

Mailing address: Research & Development Unit
 Development (2) Division
 Development Branch
 Water Supplies Department
 46/F, Immigration Tower
 7 Gloucester Road,
 Wan Chai, Hong Kong

E-mail address : rewconsultation@wsd.gov.hk

Facsimile no. 2802 2579

37. Three public forums will be held during the public consultation exercise. Please visit the following homepage for more details:
<https://www.wsd.gov.hk/en/pconsultation/recycle.html>

**Development Bureau
Water Supplies Department
October 2018**

VIEW COLLECTION FORM

Supply of Recycled Water in Hong Kong

Question 1

Do you agree to use recycled water in Hong Kong for non-potable applications only? If not, why?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

Other views: _____

Question 2

Do you agree that the Government should supply recycled water for non-potable uses in lieu of fresh water to conserve precious water resource when opportunities arise and cost effective to do so? If not, why?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

Other views: _____

Question 3

Do you agree to use recycled water for flushing in lieu of salt water in the existing salt water supply zones if it is justified after consideration of the various factors such as environmental impact, cost effectiveness, etc.? If not, why?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

Other views: _____

Question 4

Do you agree to put in place legal provisions requiring collection and transmission of grey water in separation from sewage from water-closets, latrines, urinals or similar fitments in buildings in designated areas to effect the subsequent production of recycled water by WSD, and impose penalty on a person who fails to comply with the legal provisions?

If affirmative, should penalty be imposed to:-

(A) a person who carries out the works in contravention of the legal provisions; or

(B) a person who instructs the works in contravention of the legal provisions or

(C) both of them?

If not, why?

Agree Disagree Neutral (Please ✓ as appropriate)
 A B C

Other views: _____

Question 5

Do you agree to have legal provisions to regulate and control the use of recycled water to be supplied by WSD, and impose penalties on contravention of such provisions e.g. intentional misuse of recycled water?

If not, why?

Agree Disagree Neutral (Please ✓ as appropriate)

Other views: _____

Question 6

Do you agree to the addition of dye to recycled water (i.e. “colour-labelling”) to be supplied by WSD, as an additional measure to prevent cross-connection between recycled water and fresh water supply systems and misuse of recycled water, which may limit to the major application in flushing only but not minor applications for other non-potable uses? If not, why?

Agree Disagree Neutral (Please ✓ as appropriate)

Other views: _____

Question 7

Notwithstanding Question 6, do you agree to the following non-potable uses of recycled water to be supplied by WSD without colour-labelling, for uses by Government departments to conserve fresh water resource in areas where the risks of cross-connection and/or misuse are minimal and appropriate preventive measures are in place?

(A) Landscape Irrigation; (B) Street Cleansing; (C) Water Features;
(D) Car Washing; and (E) Others (please specify)

If affirmative, please select the relevant uses, and specify other uses in (E) when necessary. If not, why?

Agree Disagree Neutral (Please ✓ as appropriate)

A B C D E _____

Other views: _____

Question 8

Do you agree that the WA should also be empowered with flexibility to permit non-potable uses of recycled water other than flushing when opportunities arise and the corresponding risks are under control, instead of effecting changes on the legislation from time to time? If not, why?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

Other views: _____

Question 9

Do you agree to the free-of-charge arrangement for the use of recycled water for flushing similar to that of the existing flushing supplies? If not, why?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

Other views: _____

Question 10

If the recycled water is permitted for non-potable uses other than flushing, do you agree that it should be charged? If not, why?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

Other views: _____

Question 11

Do you agree that the regulatory control by the existing legislations on the supply of recycled water by parties other than WSD is adequate?

If not, should the regulatory control on the following aspects of the supply of recycled water by parties other than WSD be strengthened by legislation:

(A) plumbing; or (B) water quality; or (C) use of recycled water or (D) any combination of (A), (B) and (C) (please specify)?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

A **B** **C** **D** _____

Other views: _____

Question 12

Do you agree that amendments to legislation in relation to the supply of recycled water (including those pertinent to the supply by parties other than WSD if required) would not take retrospective effects? If not, why?

Agree **Disagree** **Neutral** (Please ✓ as appropriate)

Other views: _____

Do you have any other views and suggestions?

(Please use an additional sheet if necessary)

Name / Name of organisation: _____

Please note that the Water Supplies Department wishes to be able to refer to views submitted in response to this consultation document, either in discussion with others or in any subsequent report, whether privately or publicly. Any request to treat all or part of a response in confidence will be respected but if no such request is made, it will be assumed that the response is not intended to be confidential.

